



Using the UN Biodiversity Lab to Support National Conservation and Sustainable Development Goals  
March 24 - April 7

## Questions & Answers Session 2

Please type your questions in the Question Box. We will try our best to get to all your questions. If we don't, feel free to email Amber Mccullum ([amberjean.mccullum@nasa.gov](mailto:amberjean.mccullum@nasa.gov)), Juan Torres-Pérez ([juan.l.torresperez@nasa.gov](mailto:juan.l.torresperez@nasa.gov)), Scott Atkinson ([scott.atkinson@undp.org](mailto:scott.atkinson@undp.org)) or Annie Virnig ([anne.virnig@undp.org](mailto:anne.virnig@undp.org)).

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## General Questions on UN Biodiversity Lab

**Question 1:** What is the difference between the UN Biodiversity Lab and the Nature Map?

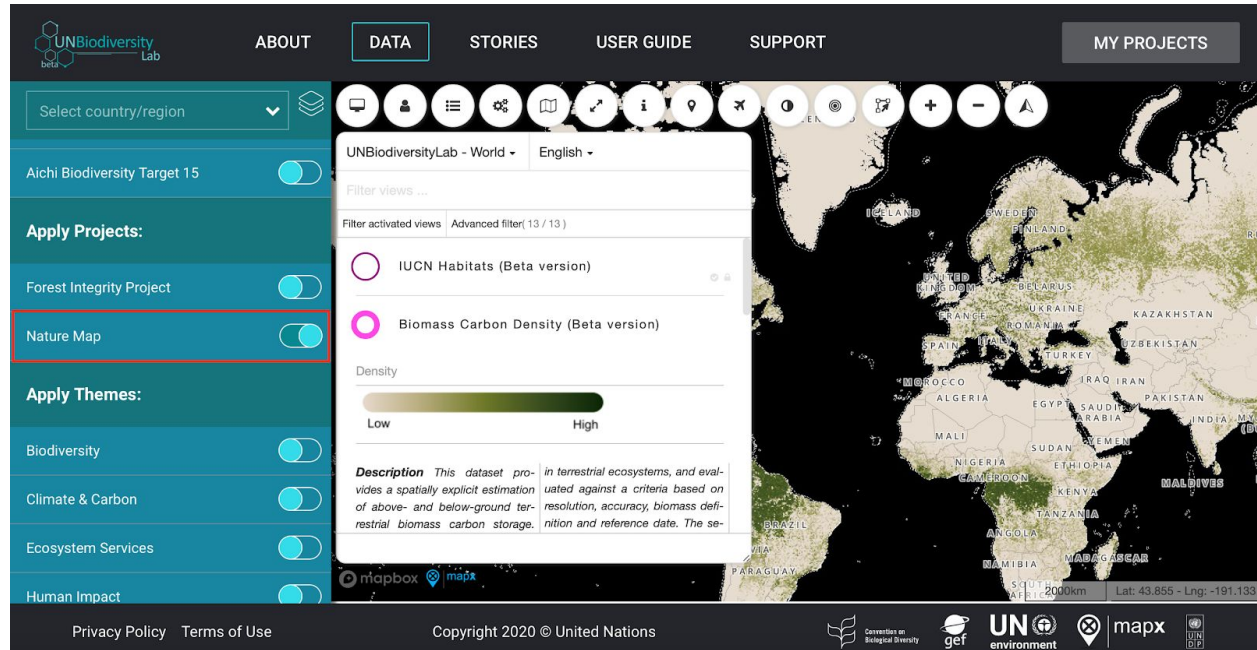
**Answer 1:** The Nature Map initiative develops an integrated global map of biodiversity, carbon storage and other dimensions of nature by consolidating and supplying data from many sources.

The draft version of these maps is available from the UN Biodiversity Lab. Just click the "Nature Map" button and then select the layer you want to see. We are actively working with the Nature Map team to explore how maps of ecosystem services can help countries meet their nature, climate and sustainable development priorities.



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**Question 2:** I would like you to tell me if the UN Biodiversity Lab is going to be integrated into QGIS?

**Answer 2:** There are no plans to create a UN Biodiversity Lab plugin for QGIS. QGIS is an amazing community built and user responsive project, but there is no direct analytical functionality that UN Biodiversity Lab would contribute on top of the current and expanding QGIS base functionality and plugins.

The UN Biodiversity Lab data is powered by MapX, which is built around an R Shiny app. You can see the source code for MapX [here](#). The data that has been compiled for visualization and dissemination in the UN Biodiversity Lab is often open license, meaning that you are welcome to explore and share anything you find on the website.

If you would like to access and download data for use in QGIS, you are welcome to download it for use in your desktop QGIS (or ArcGIS or any other desktop GIS software).

**Question 3:** Is there any API which can be used to pull the data for the visualization in academia or private sectors?

**Answer 3:** The platform is currently an iframe streaming the maps you see from the MapX platform. The next iteration of the site will be based on an API to enable better



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connections with data providers and other related websites. The platform is powered by MapX, which is built using R Shiny. You can see the source code [here](#).

**Question 4:** If the countries have already submitted their Sixth National Report, can they still load map databases?

**Answer 4:** Yes! UN Biodiversity Lab is of course still relevant to countries to further implement their NBSAP, and to fulfill their commitments to other Rio Conventions, the 2030 Agenda, and SDGs. Next week we will discuss future potential use of the UN Biodiversity Lab - stay tuned!

**Question 5:** Can I use the UN Biodiversity Lab to explore interaction between SDG targets?

**Answer 5:** The UN Biodiversity Lab was initially designed to support countries in their commitments to the Convention on Biological Diversity. However, we are really interested in expanding this focus to support countries to deliver on the 2030 Agenda for Sustainable Development and its Sustainable Development Goals (SDGs), the UN Framework Convention on Climate Change, and UN Convention to Combat Desertification.

We are working with a select number of pilot countries to identify and prioritize nature-based actions to protect, manage, and restore natural areas that can contribute to key national priorities, including for the SDGs. Join us next week to hear more about this work!

You can also toggle on the “socioeconomic” theme to see data we currently have on UN Biodiversity Lab related to sustainable development.

## Accessing National Projects

**Question 6:** Can we open a project for a developed (OECD) country?

**Answer 6:** Yes. We generally prioritize requests for private projects for United Nations and government users. However, we are always open to new use cases. Please contact us Scott Atkinson ([scott.atkinson@undp.org](mailto:scott.atkinson@undp.org)) and Annie Virnig ([anne.virnig@undp.org](mailto:anne.virnig@undp.org)) to explore this option.



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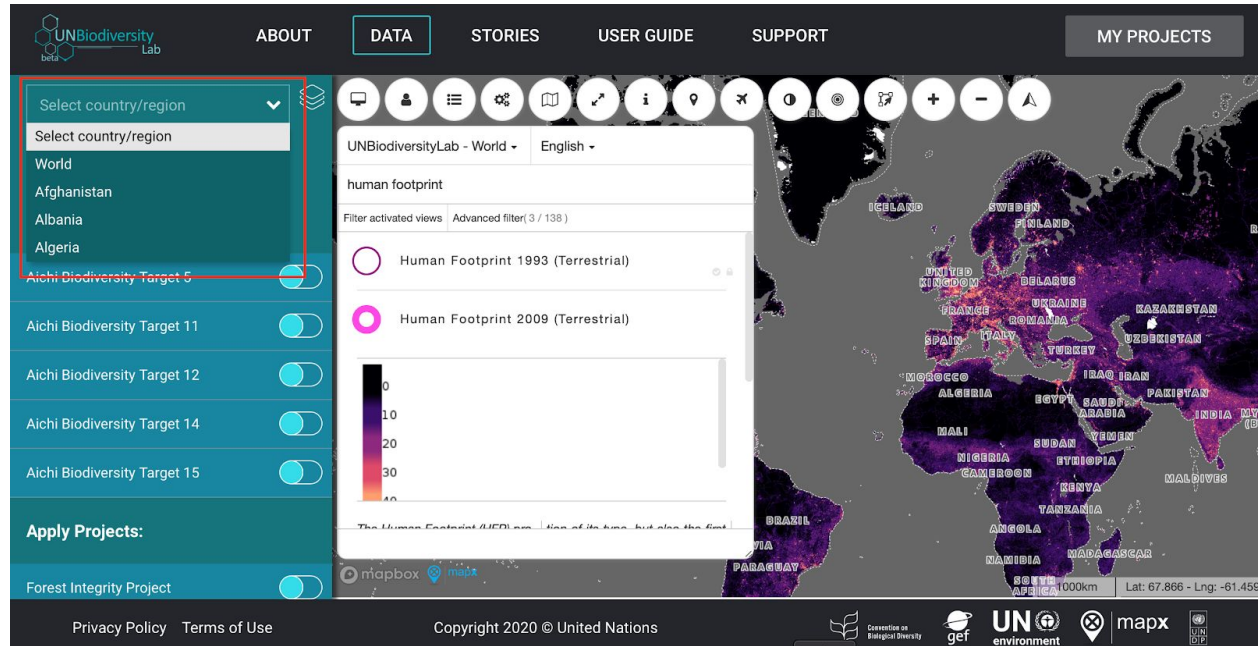
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UN Biodiversity Lab was initially created as part of UNDP and UN Environment's support to countries that are eligible to receive funding from the [Global Environmental Facility \(GEF\)](#). The GEF was established on the eve of the 1992 Rio Earth Summit to help tackle our planet's most pressing environmental problems.

The project supported 137 developing, middle-income, and small island nations to complete their Sixth National Reports to the Convention on Biological Diversity (CBD). These 137 countries received a range of capacity building support and access to private national projects where they could upload their national data to the UN Biodiversity Lab. You do not need to have a private national project to access and use the UN Biodiversity Lab.

**Question 7:** Why can't I find my country in the country list?

**Answer 7:** If you cannot find your country in the list under “My Projects”, it may be that your country was not part of the 137 originally supported by UNDP and UN Environment. Don't worry! You can still access all data available on your country on the public side of the site. Simply select your country in the left bar:

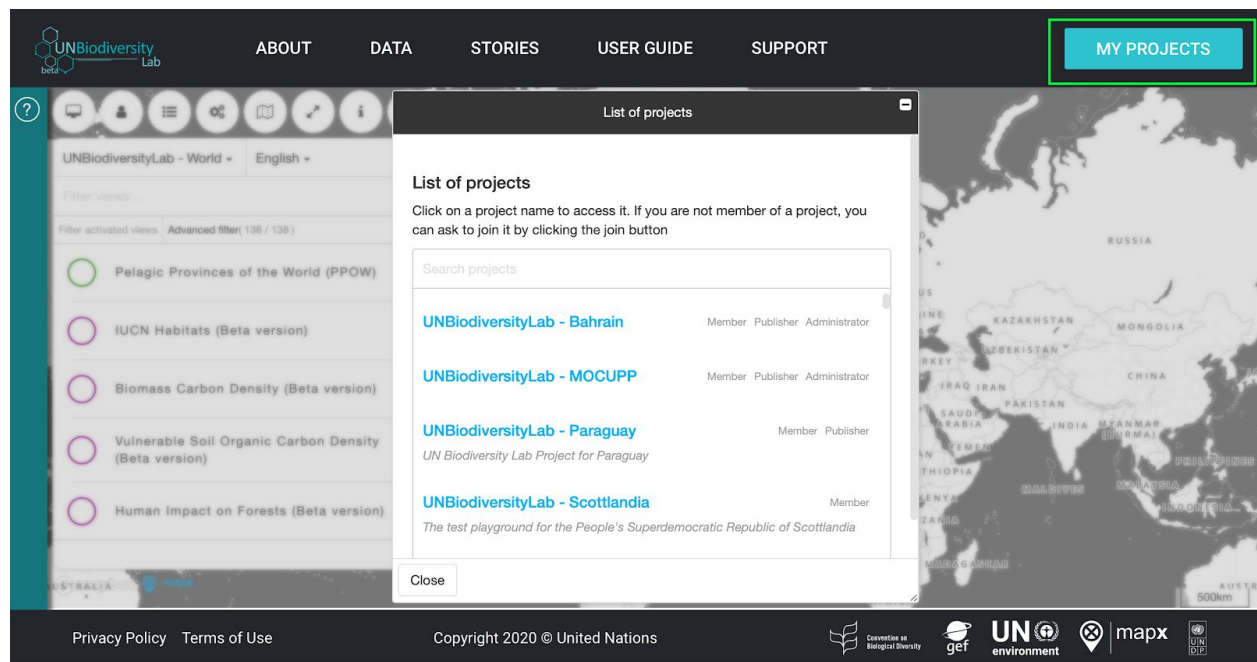


Data downloads are based on the usage restrictions provided by the original data providers, and you can download by following the process that we showed during the webinar.



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If you work with the UN or the government in one of the 137 countries, you can request access to your national project by clicking on the my projects tab. If you work with the UN or the government outside these 137 countries, we are happy to set up a national project for you. Please contact Scott Atkinson ([scott.atkinson@undp.org](mailto:scott.atkinson@undp.org)).

**Question 8:** It was said that the UN Biodiversity Lab only has data for 137 countries, but in the slides, it shows data for the whole world (ex, Protected areas). Why? Is it about how much data we can download?

**Answer 8:** All data layers on the public side of the platform are global datasets, they are not limited to 137 countries. They should cover all countries unless they are layers such as mangroves, which are limited to countries with coastal areas. Data downloads are based on the use restrictions provided by the original data providers.

The 137 countries are those supported by UNDP and UN Environment through GEF funding.

**Question 9:** As a user, can I upload data to view in the UN Biodiversity Lab?

**Answer 9:** This is possible if you are part of the private national project for your country. This was one of the main goals of developing the private national project space -- to enable countries to upload their national datasets in order to visualize them





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and analyze them in combination with the global datasets available on UN Biodiversity Lab. If you are a member of your country's national project with publisher rights, you can upload data to your national project. Only members of your national project will be able to see these layers you upload.

If you have global, regional, or national data that you think would be relevant to include in the public side of the site, we are always interested to have suggestions! Please contact Scott Atkinson ([scott.atkinson@undp.org](mailto:scott.atkinson@undp.org)).

**Question 10:** Good afternoon, for Costa Rica, who is the link with you?

**Answer 10:** For Costa Rica, the Administrator of the National Project is Ana Lucia Orozco (UNDP Costa Rica). We also work closely with Rafael Monge (MINAE) and Cornelia Miller (Laboratorio PRIAS).

If you would like to join Costa Rica's National Project, you can request access directly by clicking on the My Project box, and scrolling to Costa Rica. Alternatively, you can send Annie Virnig ([anne.virnig@undp.org](mailto:anne.virnig@undp.org)) and email with your information, and she can explore connecting you to the Costa Rica team.

**Question 11:** El Salvador is included in your countries of analysis?

**Answer 11:** El Salvador is one of the countries supported by UNDP and UN Environment to complete their Sixth National Report. It is not one of the countries for which the NASA Forest Integrity Project data is available. For more information, please contact Scott Atkinson ([scott.atkinson@undp.org](mailto:scott.atkinson@undp.org)) and Annie Virnig ([annie.virnig@undp.org](mailto:annie.virnig@undp.org)).

**Question 12:** In the Mediterranean region I am lacking data to make a region analysis. Would it be possible to improve the data to be able to link it to the Barcelona Convention and the Aichi Biodiversity Targets in this region?

**Answer 12:** We could make a project for the region, and relevant data could be populated. Please contact Scott Atkinson ([scott.atkinson@undp.org](mailto:scott.atkinson@undp.org)) for more information.

**Question 13:** What if I want to work on a community project and I do not have access to information because I do not have links with any official entity?

**Answer 13:** Thank you for your interest! We recommend that you contact Scott Atkinson ([scott.atkinson@undp.org](mailto:scott.atkinson@undp.org)) and Annie Virnig ([anne.virnig@undp.org](mailto:anne.virnig@undp.org)),



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explaining the country you are from/where you work, and explain why using UN Biodiversity Lab would be a great tool and support for you.

Based on this, we can connect either you with the administrator of your country's national project and initiate a conversation. Alternatively, if we may be able to set up a private project specifically related to your work. We are exploring this option with various indigenous peoples and local community groups.

## Data

### Update period for data

**Question 14:** How often are the data updated?

**Answer 14:** It depends on the dataset. The WDPA, for example, is streamed directly from UNEP-WCMC and updated every month. Key Biodiversity Areas are updated as the KBA gets updated. Other datasets have less exact updating intervals, but the metadata for the layer will always describe which version of the dataset it is and when it was last updated.

**Question 15:** When will the maps on human footprint be updated?

**Answer 15:** We are currently publishing the update of the Human Footprint to 2013. This is the layer that is currently available on the site, but currently only to selected countries as part of the NASA Forest Integrity Project. For countries not involved in the NASA Forest Integrity Project, the most recent version of the Human Footprint is 2009.

In addition, we are working with National Geographic Society and other partners to facilitate streamlined, automatic updates annually as new data becomes available.

**Question 16:** Protected area boundary and count has been varied in varied studies and projects especially in global studies. The UN Biodiversity uses data from the World Database on Protected Area (WDPA), this often varies from national and local data on protected areas. What process is followed for updation of and validation of the dataset?

**Answer 16:** We work with and are in contact with colleagues from UNEP-WCMC who manage the WDPA and work to collect data from governments. This is a formal legal process, therefore the data available to the WDPA is that which the government submits. There are many redundancies in the WDPA (the "same" PA can exist in more than one polygon) and there is sometimes no temporal record of changes in the



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boundaries of the PA. More information on the WDPA update and data validation process can be found [here](#).

**Question 17:** Does UN Biodiversity Lab have data over time to see temporal changes on maps or to make spatial and temporal analysis with that data?

**Answer 17:** This depends on the data layer. This depends on the data layer. Some raster data, such as the Human Footprint and Forest Cover, are available at different time periods. Others are only available for one period. We are working to include more data sources that show change over time and/or can be updated in real time. It is possible to View and query vector datasets based on time attributes, as well as to design View styles based on time attributes of data. For more information, please contact Scott Atkinson ([scott.atkinson@undp.org](mailto:scott.atkinson@undp.org)).

### Resolution of data

**Question 18:** Where can we see the spatial resolution of each layer?

**Answer 18:** The spatial resolution of raster data is available in the metadata of the dataset or described in the data description.

**Question 19:** Is the platform configured for continental scale analysis?

**Answer 19:** For now, the platform has been focused at the national level to support countries to prepare and submit their Sixth National Report (6NR) to Convention on Biological Diversity (CBD). Therefore, the scale was the country/national level. Now, and looking forward, we want to ensure UN Biodiversity Lab supports countries further, and we would be happy to take into consideration other scales - it can be continental, but also subnational.

We always love hearing more from our users and their needs. Don't hesitate to be in touch with our spatial planner Scott Atkinson ([scott.atkinson@undp.org](mailto:scott.atkinson@undp.org)) to explain a bit more about your situation, and how UN Biodiversity Lab could support your work at the regional level.

In addition, all data for the NASA Forest Integrity Project is available for download at the continental scale.

**Question 20:** Are the data at the population or species level?





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**Answer 20:** IUCN Range data is generally at the species, not population, level. Data from aquamaps are probability of occurrence data.

**Question 21:** Is the population density database available for the entire globe? or only for the areas included in the target countries?

**Answer 21:** The population data is global.

### Data from NASA Projects

**Question 22:** What is the spatial resolution of the products of the NASA Forest Integrity Project?

**Answer 22:** The scale range depends on the input data used. For many of the datasets this is Landsat data and therefore has a resolution of 30 meters. For the Human Footprint and any datasets that use the Human Footprint (e.g. Forest Structural Integrity Index) the resolution is 1 kilometer. For more information, see the project brochure [NASA Forest Integrity Project](#).

**Question 23:** Does the Forest Integrity Project correspond to an analysis of areas that are actually only forest or are there other types of natural ecosystems?

**Answer 23:** The NASA Forest Integrity Project only looks at areas with humid tropical forests. The project initially focused on eight pilot countries: Brazil, Colombia, Costa Rica, DRC, Ecuador, Indonesia, Peru, and Viet Nam. In the final year of the project, we provided data access to 21 additional countries with humid tropical forests: Angola, Bolivia, Burundi, Cambodia, Cameroon, Central African Republic, Equatorial Guinea, Gabon, Guyana, Kenya, Malaysia, Nigeria, Panama, Papua New Guinea, Philippines, Republic of Congo, Rwanda, South Sudan, Suriname, Tanzania, Uganda.

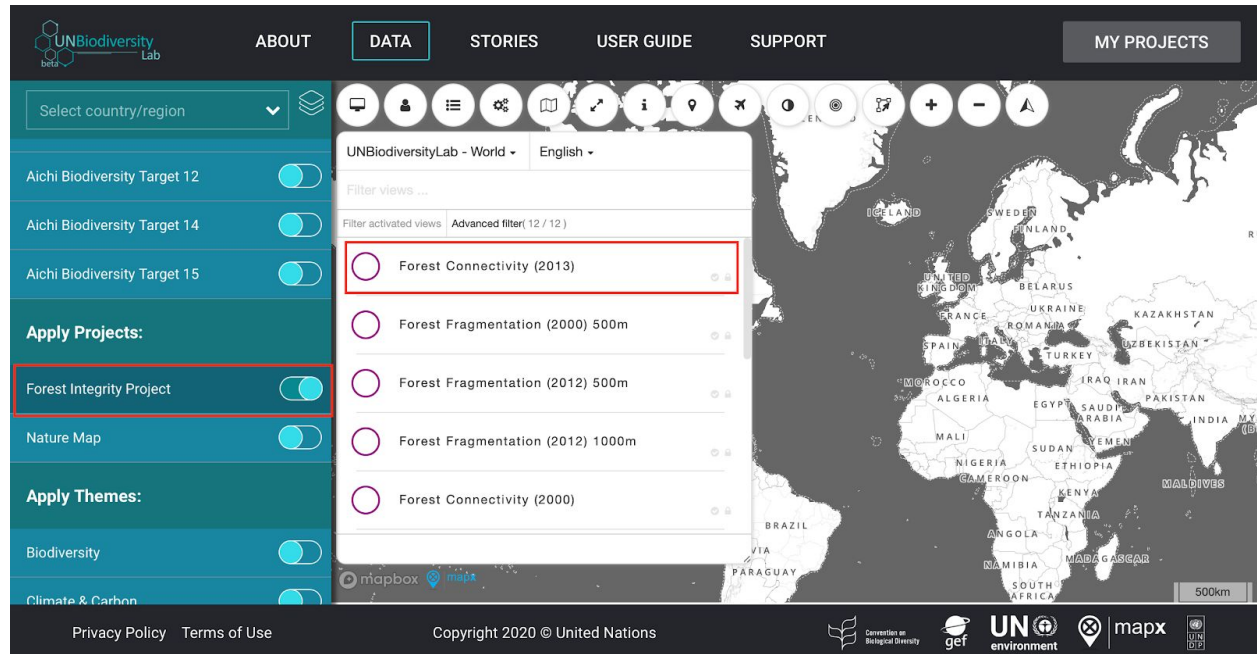
**Question 24:** Where do you find forest connectivity?

**Answer 24:** Click on the “Forest Integrity Project” button under “Apply Projects”. The Forest Connectivity layer is listed here. This layer is currently only available for countries with humid tropical forests for which NASA Forest Integrity Project data is available.



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### Particular types of data

**Question 25:** What is raster data?

**Answer 25:** Broadly speaking, it is a matrix of pixels where each one has a particular value of some factor such as temperature for example. For basic information related to remote sensing, we recommend that you access the Fundamentals of Remote Sensing at: <https://arset.gsfc.nasa.gov/webinars/fundamentals-remote-sensing>

**Question 26:** Does this tool have data relevant for small island states?

**Answer 26:** We've worked with many countries on a case by case basis to address this question. The quality of global data for small island states can vary country to country based on several factors, including cloud cover.

We recognize that often many countries have higher resolution national data, which is why we have created private workspaces on the UN Biodiversity Lab for all of the countries that we work with, where they can upload national level data to visualize and analyze it in combination with global data layers. We are also working to build connections with key partners such as the [BIOPAMA programme](#). BIOPAMA is developing regional hubs to store higher resolution data. We are working to better



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connect BIOPAMA and other institutions that can offer higher resolution data for small island states.

Finally, our spatial data expert Scott Atkinson is also able to advise on what global data layers might be most useful for your particular small island state. Please feel free to also reach out to him directly at [scott.atkinson@undp.org](mailto:scott.atkinson@undp.org) with your questions. He can help to identify the best data layers available based on your priorities and needs.

**Question 27:** How can we use the UN Biodiversity Lab for marine conservation? I've noticed that Marine Protected Areas (MPAs) from WDPA are included but there are huge gaps in the data.

**Answer 27:** MPA data is pulled in directly from the WDPA, but it's also important to note that WDPA is only as up-to-date as the data that countries provide to them. It is possible that areas have not been submitted to the WDPA, or that they may be Locally Managed Marine Areas that have not been included.

**Question 28:** I am working on the use of remote sensing data and terrestrial data to assess the impact of in-and-outdoor thermal conditions in an area (Manila City, Philippines). Is there any available data for this? Data such as population, land surface temperature, urban change and expansion, water, and energy consumption.

**Answer 28:** Landsat has a thermal band, and is often used for urban heat island mapping. MODIS also has a temperature product. Take note of the spatial resolution, particularly for the MODIS data. The VIIRS sensor can be used for global nightlights data, which has been used as a proxy for population and urban extent metrics. NASA's SEDAC data center has population data. Please see the Trends. 2Earth tool by Conservation International that tracks urban extent. Here are some helpful links:

- Landsat thermal data:  
<https://landsat.gsfc.nasa.gov/thermal-infrared-sensor-tirs/>.
- There is also a special issue on this topic:  
[https://www.mdpi.com/journal/remotesensing/special\\_issues/UHI\\_rs](https://www.mdpi.com/journal/remotesensing/special_issues/UHI_rs)
- MODIS thermal data: <https://modis.gsfc.nasa.gov/data/dataproduct/mod11.php>
- VIIRS Black Marble (night lights/population, 2012 and 2016 composites):  
<https://viirsland.gsfc.nasa.gov/Products/NASA/BlackMarble.html>
- NASA Worldview (for the VIIRS Nighttime imagery  
<https://worldview.earthdata.nasa.gov/>
- Socioeconomic Data and Applications Center (population data) SEDAC:  
<https://sedac.ciesin.columbia.edu/>



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- Trends. Earth webinar:

<https://arset.gsfc.nasa.gov/land/webinars/land-degradation-SDGs19>

**Question 29:** Is there satellite imagery available on UN Biodiversity Lab?

**Answer 29:** We offer satellite base maps from Bing. Further, the satellite data available on the site are only RGB baselayer tiles of the satellite data. They are not the multi-spectral remotely sensed data that is what is useful for remote sensing analyses. In most cases users can access these same layers from the same providers in Desktop GIS software (note that 'normal' use is typically within the free allocation - higher usage does typically require a fee per use). QGIS can be used to pull in RS tiles for example.

**Question 30:** The presentation talked about data available showing threats to biodiversity. Does UN Biodiversity Lab include data on threats for water or soil quality?

**Answer 30:** Not explicitly.

**Question 31:** Do you have information about the functional diversity of ecosystems on this portal?

**Answer 31:** There currently isn't any data on functional diversity, species nor ecosystems.

**Question 32:** Is there data on recent crop areas? and about pesticides? it would be interesting to combine both to see the problem with the absence of some species.

**Answer 32:** There is not unfortunately.

**Question 33:** In regard to biodiversity, is species richness based on all taxa or some limited taxa (e.g., mammals)?

**Answer 33:** Species richness maps include range data for mammals, amphibians, and birds.

**Question 34:** What is proportional range rarity?

**Answer 34:** Range rarity metrics are measures that combine endemism and species richness data. They are indices that lower the contribution of wide ranging species to overall species richness and highlight areas that have relatively high proportions of narrow-range species.

**Question 35:** Is it possible to add a grid with coordinates?



**Answer 35:** Uploading a grid of coordinates would be no different than uploading any other geospatial dataset. If you are a publisher or administrator of a national project, you can do this. Please contact Scott Atkinson ([scott.atkinson@undp.org](mailto:scott.atkinson@undp.org)) for further information.

**Question 36:** Does the platform provide access to satellite remote sensing data for the determination of NDVI and NPP, as an example.?

**Answer 36:** Landsat and MODIS data can be used for vegetation indices like the NDVI. MODIS has an NDVI and NPP product, and you can use the Landsat bands to calculate NDVI. Here are some helpful links:

1. Landsat: [https://www.usgs.gov/land-resources/nli/landsat/landsat-normalized-difference-vegetation-index?qt-science\\_support\\_page\\_related\\_con=0#qt-science\\_support\\_page\\_related\\_con](https://www.usgs.gov/land-resources/nli/landsat/landsat-normalized-difference-vegetation-index?qt-science_support_page_related_con=0#qt-science_support_page_related_con)
2. MODIS: <https://modis.gsfc.nasa.gov/data/dataproduct/mod17.php>
3. NASA Worldview (MODIS, VIIRS, and many more related to wildfires, rainfall, air quality, etc.): <https://worldview.earthdata.nasa.gov/>
4. Earthdata Search: <https://earthdata.nasa.gov/>
5. Landsat LookViewer: <https://landsatlook.usgs.gov/>
6. Land Processes Distributed Active Archive Center (LPDAAC): <https://lpdaac.usgs.gov/>

**Question 37:** I am working on the wetlands of Algerian cultural parks, I would like to know if the UN Biodiversity Lab will soon put on its platform the shapefiles of the delimitation of Ramsar sites and if the monitoring of phytoplanktonic indices, NDVI and other hydrographic indicators (temperatures of surface water, salinity...) is possible for a fine scale corresponding to wetlands of the order of 10 to 5 hectares.

**Answer 37:** The Ramsar site data was just updated today on the site, so you should now see Ramsar sites again within Algeria (where there are boundaries of course; those that do not have boundary delimitations remain as points). We do not currently have any hydrographic data, including phytoplanktonic indices. MODIS NDVI data is available but we are currently having some issues with the web servers we pull the data from, so is temporarily not available. It's worth noting that MODIS data would very likely be much too coarse for the 5-10ha scale you are looking at. Your best bet (using free data) would be to get hold of either some landsat or sentinel data that would allow you to calculate NDVI for the time periods of interest. Google Earth Engine may be a good place to explore that.



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Regarding monitoring of phytoplanktonic indices, NDVI and other hydrographic indicators (temperatures of surface water, salinity) can be used. You can find more information about these data on the Physical Oceanography Distributed Active Archive Center (PO.DAAC) here:

- <https://podaac.jpl.nasa.gov/SeaSurfaceTemperature>
- <https://podaac.jpl.nasa.gov/SeaSurfaceSalinity>

Participants are also encouraged to see previous ARSET webinars on water quality for more information on the use of remote sensing data/indices to assess for phytoplankton functional types.

- Remote Sensing for Freshwater Habitats:  
<https://arset.gsfc.nasa.gov/land/webinars/2019-freshwater>
- Remote Sensing for Coastal and Ocean Applications:  
<https://arset.gsfc.nasa.gov/land/webinars/coastal-oceans-2016>

**Question 38:** What variables do you include to make the human footprint maps?

**Answer 38:** The human footprint allows determining the extent of human modification on natural habitats. By using eight standardized data sets for everyone — built environment, population density, electrical infrastructure, farmland, grasslands, railways, main roads and waterways— this parameter quantifies human pressure on ecosystems across the planet. For more information see the brochure on the NASA Forest Integrity Project.

**Question 39:** Why does the Himalayas in India have the biggest Human Footprint?

**Answer 39:** The upper Ganges Plain has a very high average Human Footprint because it is very heavily populated and very highly modified by human activity, and this does extend into the foothills of the Himalaya. For more info about the data that contributes to calculating the HFI, and to help explore possible reasons for any inconsistencies the questioner is seeing, see:

Venter, O., Sanderson, E.W., Magrath, A., Allan, J.R., Beher, J., Jones, K.R., Possingham, H.P., Laurance, W.F., Wood, P., Fekete, B.M., Levy, M.A., Watson, J.E.M., 2016. Sixteen years of change in the global terrestrial human footprint and implications for biodiversity conservation. *Nature Communications* 7, 12558.

<https://doi.org/10.1038/ncomms12558>





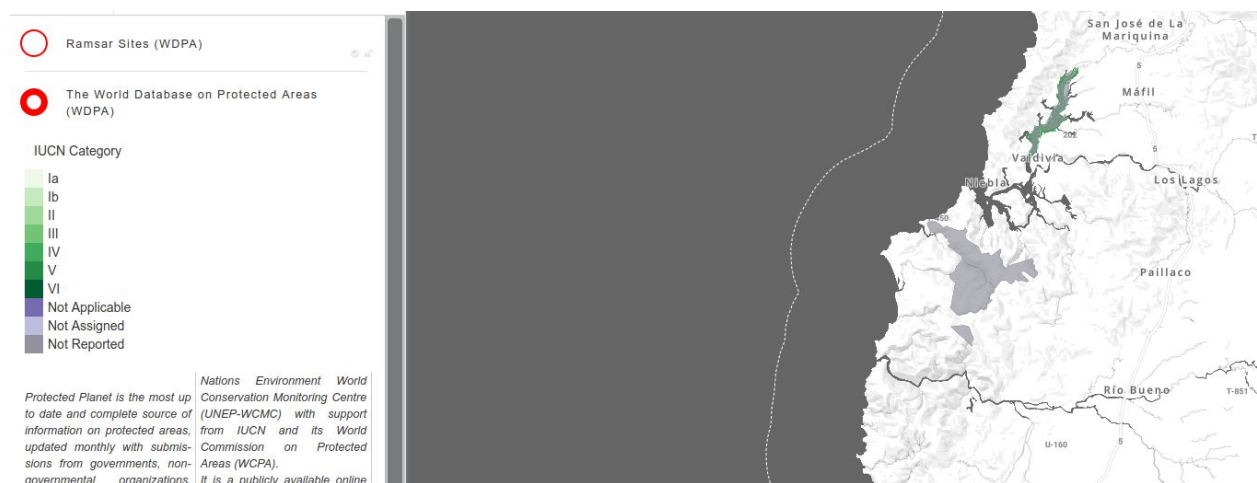
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**Question 40:** WDPA data sources are remote sensing or field data or both are validated by the countries of origin?

**Answer 40:** WDPA boundaries are submitted by national governments to the UN Environment World Conservation Monitoring Centre, and as such they are the legally defined boundaries of the Protected Areas. These boundaries can change though, and it is not unheard of for a PA boundary to suddenly move. Further, countries often work to better delineate boundaries as and when they can, but again, these boundaries do represent the legal boundaries of the PA, per government, at the time they are submitted. They should not however be considered survey-quality land boundaries for any high precision data needs.

**Question 41:** How can I report a park in my country for submission to the WDPA? Alerce Costero National Park is not reported as it is a formal park.



**Answer 41:** The correct contacts at UNEP-WCMC can be found at <https://www.protectedplanet.net/>. Or their general contact email is [protectedareas@unep-wcmc.org](mailto:protectedareas@unep-wcmc.org). However, el Parque Nacional Alerce Costero is indeed in the WDPA: it does not have an IUCN category, but is a designated National Park (see image below).

**Question 42:** Does UN Biodiversity Lab have Nitrogen data? Or do you know if that information is being generated?

**Answer 42:** UN Biodiversity Lab does not have Nitrogen data, however, here is a great resource for Nitrogen Dioxide data:



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<https://earthdata.nasa.gov/learn/articles/feature-articles/health-and-air-quality-articles/find-no2-data>

**Question 43:** Does the database have information on forest fuels?

**Answer 43:** On firewood? Usage or availability? There is data available on that globally but we have not added it to UN Biodiversity Lab yet, but could if desired. Please contact Scott Atkinson ([scott.atkinson@undp.org](mailto:scott.atkinson@undp.org)) for further information.

**Question 44:** I am wondering how we can use the UN Biodiversity Lab to create a map that shows the trace impact of environmental tobacco production in Zimbabwe (farmers mainly use fuelwood for tobacco processing).

**Answer 44:** Of relevance to mapping that impact might be data on forest loss, so the Global Forest Cover data could be possible use. Also Human Footprint data may be helpful. The scale of the tobacco production may need to be high to detect that in these datasets.

**Question 45:** From which definition of risks is worked to determine the threat and vulnerability of species?

**Answer 45:** The threatened species richness data includes species on the Red List with statuses of Critically Endangered, Endangered or Vulnerable. See <https://www.iucnredlist.org/resources/redlistguidelines> for more details.

**Question 46:** Carbon data since what year are recorded? Can they be used for surveying Municipal, National Greenhouse Gas Inventories?

**Answer 46:** The different carbon datasets have different years of reference. On the latter question, it would be best to confer with an expert on carbon storage, mapping, and inventories to determine what is best practice and legally acceptable.

**Question 47:** Can the methodology be accessed, can evapotranspiration data be obtained, and what methodology do they use?

**Answer 47:** To view the methodology by the data layers in UN Biodiversity Lab, there is information in the description and metadata of each data layer available.

For evapotranspiration we recommended you go to the MODIS page for example (<https://modis.gsfc.nasa.gov/data/dataproduct/mod16.php>), where they can be downloaded but on a modest and not very fine scale. You can also get more information through the United States Geological Survey at:



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[https://www.usgs.gov/mission-areas/water-resources/science/national-water-census-evapotranspiration?qt-science\\_center\\_objects=0#qt-science\\_center\\_objects](https://www.usgs.gov/mission-areas/water-resources/science/national-water-census-evapotranspiration?qt-science_center_objects=0#qt-science_center_objects)

**Question 48:** I would like to know if there are data on the use of water, state of rivers, irrigation areas and treatment plants.

**Answer 48:** There currently is not; however, data on urban water extraction locations is available, with the full City Water Map database being available at:

<https://knb.ecoinformatics.org/view/doi:10.5063/F1J67DWR>.

## Downloading Data from UN Biodiversity Lab

**Question 49:** Can you use the data freely for scientific publications and student thesis?

**Answer 49:** Any usage restrictions on data are noted in the license condition of the data. Even where data is seemingly restricted, academic use is almost always allowed, following of course academic tradition and providing full attribution to the data's authors.

**Question 50:** I appreciate that data layers have links to the relevant publications describing them in the peer-reviewed literature - critical for understanding the nature and limitations of the data. However, and though this isn't so much of a problem for a university user in the USA, it looks as though some of these papers are behind paywalls. Does the UN Biodiversity Lab project have any plans for making these papers available to users who aren't colocated with big institutional journal subscriptions?

**Answer 50:** We do not actually have access to those ourselves at the UNDP, but we are working on a way to provide those that are available through open-access journals or through preprints from the authors. We need to be very careful to follow access rights for journal articles as a high visibility institution. If you have further questions, please reach out to Scott Atkinson ([scott.atkinsons@undp.org](mailto:scott.atkinsons@undp.org)).

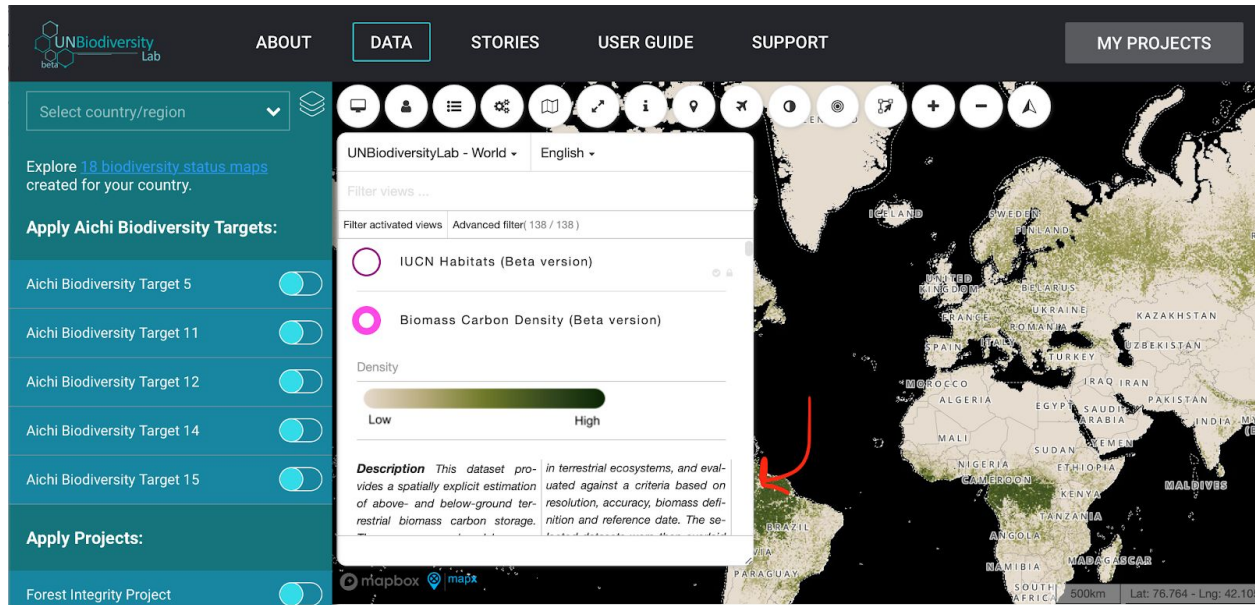
**Question 51:** Can you access the research from where you obtained the data from the UN Biodiversity Lab?

**Answer 51:** This information, including the citation for the peer-reviewed journal in which the data was published, is available in the data description and the metadata.



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**Question 52:** Can data layers be exported as shapefiles to open in software such as ArcGIS?

**Answer 52:** Most, but not all, data can be exported to many standard GIS formats, including Geopackages, ESRI Shapefiles, Geojson, etc. We are not allowed to permit downloading of some datasets, per our data use agreements with the data providers.

**Question 53:** Is it possible to download the raw data instead of just the maps? So it can be combined with your own data?

**Answer 53:** Yes, this is the process that Scott demonstrated in his presentation. You can download vector datasets easily from the site, depending on the use restrictions placed on data by the original provider. To download raster datasets, please contact Scott Atkinson ([scott.atkinson@undp.org](mailto:scott.atkinson@undp.org)) and we can help you to do this!

**Question 54:** Are global data layers available for download? (regarding information on forest data)

**Answer 54:** Yes, that is what we show in the presentation. You can easily download vector data sets from the site, based on usage restrictions. To download raster data sets, contact Scott Atkinson ([scott.atkinson@undp.org](mailto:scott.atkinson@undp.org)) and we can help you do so. For the data generated by the NASA Forest Integrity Project, you can download it for the 29 countries that are part of the project (which have wetland tropical forests). For more information see [this instruction document](#).



**Question 55:** Can the layers/maps generated in these processes be consumed later by geoservices? Or only by download?

**Answer 55:** Data hosted on our servers can be accessed via both WMS and WFS services, we're allowed to do so by agreements with our data provider partners.

**Question 56:** Is there any guideline that describes the fields when downloading in SQL format?

**Answer 56:** Users can download data in the SQLite format, a standard GIS format (which is itself extended in the Geopackage standard: <http://www.geopackage.org/>). More info on the SQLite standard can be found at: <https://sqlite.org/docs.html>. This should not be confused with an SQL dump format.

**Question 57:** Is the data downloaded with metadata (projection, source, etc.)? or do they have to be requested separately?

**Answer 57:** The metadata is exported concurrently in json format.

**Question 58:** Can those layers offered by UN Biodiversity Lab be used in free programs like QGIS? Or more statistical programs like Power BI?

**Answer 58:** Data exported into one of the many standard GIS formats can be used in all standard GIS software, including QGIS. Equally, many statistical software programs are able to read these file formats, allowing for further use in data analysis.

## Visualizing Data and Running Analyses on UN Biodiversity Lab

**Question 59:** Can analysis be done on raster layers in the same application?

**Answer 59:** At this point, you are only able to conduct analyses on vector data on UN Biodiversity Lab. We know that conducting analyses on raster data is a very important need, and the second iteration of the site will include the ability to run zonal statistics on raster data. We should have more information about the launch date for this new version of the site in the next month.

**Question 60:** How do I stay zoomed in on a country/region when changing datasets? Often the screen changes back to global view when doing this.

**Answer 60:** This should be just an issue with the website now and may be due to the high number of users. It shouldn't be the case.



**Question 61:** What's the difference between applying themes and applying filters in the catalogue? Is the theme applied within the chosen dataset and the filter within the catalogue list?

**Answer 61:** Themes are larger groupings of data that relate to particular ABTs or other projects such as the NASA FIP or NatureMap projects. These are front-end collections seen on the website itself. Filtering of the data catalogue actually filters data within the database per either the search terms you supply or one of the defined data collection labels.

**Question 62:** What projection are you using to calculate size when creating intersections using toolbox? Geodesic?

**Answer 62:** Area calculations are made using the geoid. What this means is that behind the scenes (in the PostGIS enabled database), (planar) geometries are being cast to geographies.

**Question 63:** When data is gathered how many layers can be visualized and intersected?

**Answer 63:** It is currently possible to run intersection analyses on up to 3 layers. You can visualise as many as you want.

**Question 64:** Is it possible for us to create inset maps within the map composer?

**Answer 64:** It is unfortunately not available at present.

**Question 65:** How is the UN Biodiversity Lab properly cited if a map generated in it is used?

**Answer 65:** We recommend this format:

Title [Format]. Data. Name of Person Who Created the Map. Map Generated by the UN Biodiversity Lab. [www.unbiodiversitylab.org](http://www.unbiodiversitylab.org). (Date Accessed).

Example: Mangrove Forest Soil Organic Carbon [PDF]. 2018. Created by James Bond. Map Generated by the UN Biodiversity Lab. [www.unbiodiversitylab.org](http://www.unbiodiversitylab.org) (19 June 2018).

Importantly, if you have not included attribution for the data layers that you use in the map on the map itself, then you need ensure you include the correct attribution data for all the data sources used clearly within the caption for the figure/map.





**Question 66:** Can the vector/raster symbology be manipulated? Can other basemaps be integrated?

**Answer 66:** Vector layer symbology can be altered if you are the owner of the data. We are working to allow users both the ability to alter the style of vector and raster data to enhance the mappability of the data when using multiple datasets. Users can select between the standard Mapbox style basemap and a satellite view at present. However; an almost unlimited number of basemap styles can be brought in using user defined Mapbox (or other) tiles, for those that would want to play around more.

**Question 67:** Do you use any programming language to manipulate the layers?

**Answer 67:** Advanced users can implement basic queries in SQL (Postgres SQL), but there are no further capabilities to manipulate data in other programming languages currently. You can also write to Scott Atkinson directly with any questions at [scott.atkinson@undp.org](mailto:scott.atkinson@undp.org).

## Technical Issues

**Question 68:** I have tried registering many times but have never received any code. Any suggestions?

**Answer 68:** Please check your spam folder. The code often ends up there! You should receive it within a few minutes of registering. If you continue to have problems, please contact Scott Atkinson ([scott.atkinson@undp.org](mailto:scott.atkinson@undp.org)).

**Question 69:** I can only use the Lab for 20 minutes with the password provided. Any ideas?

**Answer 69:** This is probably due to the sheer volume of people we are seeing on the site right at this moment! If it continues please let us know, including your location and the browser that you are using.

**Question 70:** It says the platform has exceeded its quota of concurrent users. What is the limit on concurrent users and is this often a problem?

**Answer 70:** Like the brave new world we are finding ourselves in during the COVID-19 pandemic, the sheer numbers we are seeing on the platform are a brave new world for UN Biodiversity Lab! This is the first time we've had this! We call this a stress test to the system, and can help us to make it better able to handle high web traffic in the



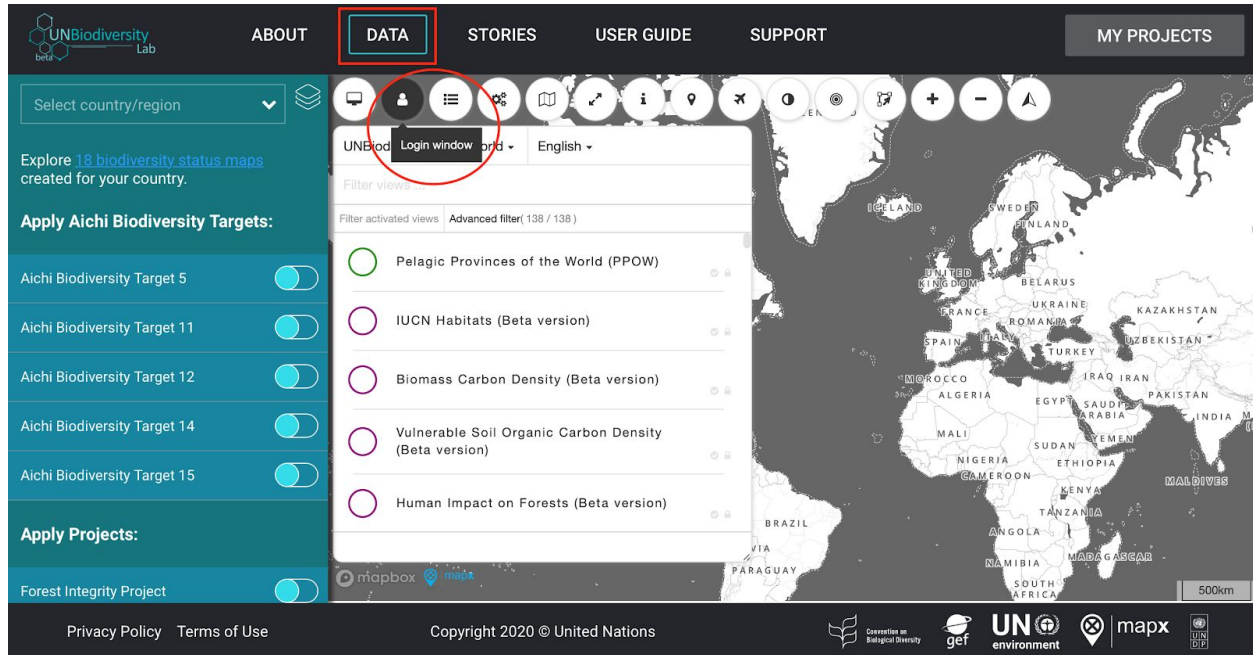
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future. We will make the presentation available afterwards and you can do the exercise on your own over the next week.

**Question 71:** I cannot access the registration interface after clicking on About

**Answer 71:** Please click on the “data tab”, then select the user icon, as shown below.



**Question 72:** Where do I register the ID that was sent to me by mail?

**Answer 72:** There will be a box that pops up as soon as you enter your email asking for the code. You should see this immediately as soon as you send your email. See the first entry in our [online user guide](#) “How do I register and log-in?” for an animated GIF that shows this. If you continue to have issues, please don’t hesitate to contact Scott Atkinson at [scott.atkinson@undp.org](mailto:scott.atkinson@undp.org).

**Question 73:** I received my code and I am logged into the site ... but I don't see any data layers! Any suggestions?

**Answer 73:** Sometimes the site takes a little bit to load, especially if you have low bandwidth. Please try refreshing and waiting a minute. If you continue to have issues, please contact our spatial data expert Scott Atkinson ([scott.atkinson@undp.org](mailto:scott.atkinson@undp.org)), who can help you to troubleshoot.

**Question 74:** What are the options for using the lab when there is no internet?



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**Answer 74:** Unfortunately the platform does require an internet connection. The site is optimized for a low-bandwidth connection, but it does still require an active internet connection.

If you have desktop GIS software on your computer, you could download data layers of interest and use these in an offline environment.

## Training & Resources

**Question 75:** I don't see on the page the option to download the slides from this third basic analysis presentation. Will they share them?

**Answer 75:** The presentation on basic analyses is available on the NASA ARSET webinar page here: [English](#) | [French](#) | [Spanish](#).

**Question 76:** Are there supporting documents or articles on some of the products? For example human footprint?

**Answer 76:** For more information on the data products released through the NASA Forest Integrity Project, please see our project brochure, available in [English](#), [French](#), and [Spanish](#). If you are interested in the peer-reviewed articles associated with this project and we can share the author copies.

For peer-reviewed articles for other data layers on UN Biodiversity Lab, please see the data description box for citation information.

If you have further questions, please don't hesitate to contact Scott Atkinson ([scott.atkinson@undp.org](mailto:scott.atkinson@undp.org)).

**Question 77:** Could we have access to any of you to answer questions after this training about the management of the Un Biodiversity Lab?

**Answer 77:** Of course. Please contact Scott Atkinson ([scott.atkinson@undp.org](mailto:scott.atkinson@undp.org)) and Annie Virnig ([anne.virnig@undp.org](mailto:anne.virnig@undp.org)) with any questions.

**Question 78:** Can you please repeat the slide where the email appears to request downloaded data in Raster format?

**Answer 78:** Please contact Scott Atkinson ([scott.atkinson@undp.org](mailto:scott.atkinson@undp.org)) if you are interested in downloading raster data from UN Biodiversity Lab.

**Question 79:** The trainings that can be requested, do they have any cost?



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**Answer 79:** Which training are you referring to? UNDP has a series of recorded trainings on UN Biodiversity Lab and the NASA Forest Integrity Project that are available free of cost. Please contact Scott Atkinson ([scott.atkinson@undp.org](mailto:scott.atkinson@undp.org)) and Annie Virnig ([anne.virnig@undp.org](mailto:anne.virnig@undp.org)) to learn more.

All training offered through the NASA ARSET programme are free. You can access them on the ARSET website here: <https://arset.gsfc.nasa.gov/>. We have them categorized by theme, and you can find all the trainings related to land management, such as land cover classification, change detection, land degradation and urban growth, the Sustainable Development Goals, etc. at the land-specific website here: <https://arset.gsfc.nasa.gov/land>.

**Question 80:** Can someone from my team get certified by watching the videos of the sessions and doing the exercises? This in case of not being able to connect at the moment

**Answer 80:** Unfortunately we only provide certificates of completion to people who have attended all the live webinars and complete the homework. However, all of the training materials and recordings of the webinars are available on our training website and our YouTube Channel.

- <https://arset.gsfc.nasa.gov/land/webinars/un-biodiversity-2020>

**Question 81:** Is there an attendance record somewhere?

**Answer 81:** The webinar software takes your attendance so that we can provide certificates of completion to those that take all the webinars and complete the homework. If you are interested in the information from you fellow attendees, we recommend that you copy and paste the introductions from the chat box during the webinar. We cannot share that information to attendees after the training.

**Question 82:** I failed to do the practice example. Is there a text guide?

**Answer 82:** You can see the exercise and the step by step instructions in today's powerpoint on the NASA ARSET webinar page here: [English](#) | [French](#) | [Spanish](#).

**Question 83:** If I was not able to master the map composer tool during the webinar, will I be able to advance in the training?

**Answer 83:** Yes, it takes some time to play around with the tool and learn how to use it efficiently! We only gave you a few minutes during the webinar, but suggest you



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continue to play around with this when you have more time. If you still have questions, please don't hesitate to contact Scott Atkinson ([scott.atkinson@undp.org](mailto:scott.atkinson@undp.org)).

**Question 84:** Is there literature to carry out the analysis on the maps?

**Answer 84:** Yes, we have some two Technical Guidances on Spatial Data available on the NBSAP Forum! There are some examples of analyses in [Volume 2: Using 18 Biodiversity Status Maps in Your Sixth National Report](#).

If you have any further questions, please feel free to contact Scott Atkinson ([scott.atkinson@undp.org](mailto:scott.atkinson@undp.org)).